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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/643,073	08/21/2000	Irfan Amanat	T30411US	8199

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06/09/2005

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EXAMINER

PATEL, JAGDISH

ART UNIT	PAPER NUMBER
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3624

DATE MAILED: 06/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center">Office Action Summary</p>	<p>Application No.</p> <p>09/643,073</p>	<p>Applicant(s)</p> <p>AMANAT ET AL.</p>	
	<p>Examiner</p> <p>JAGDISH PATEL</p>	<p>Art Unit</p> <p>3624</p>	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is in response to amendment filed 10/28/2004.

Response to Amendment

2. Claims 1-20 have been amended and new claims 21-22 have been added. Claims 1-22 are currently pending.
3. Amendment to the specification has been entered as requested.

Response to Arguments

4. Applicant's arguments with respect to claim 1-3 and 11-13 have been considered but are moot in view of the new ground(s) of rejection.
- 5.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.
7. Claims 3-9, and 13-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
8. Claim 3 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential functional relationship because:
Claim 3 recites limitation "net order count for the first port stored in a processor". This limitation does not functionally relate to any process step of the parent claim 1. Claim 3 also is unclear because the limitations "net order count for the first port stored in a processor" and "the net number of orders" lack proper antecedent basis in the claim as claim 1 only refers to a first

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order and a second order. It is asserted a net order count for the first port must be determined and stored (in a processor) prior to the decrementing step is carried out.

Claim 4 also inherit same defect as its parent claim 3.

Claim 5 recites limitation "an acknowledgement count for the first port stored in a processor" This limitation does not functionally relate to any process step of the parent claim 1. Claim 5 also is unclear because the limitations ""an acknowledgement count for the first port stored in a processor" lack proper antecedent basis in the claim as claim 1 only refers to a first order and a second order. It is asserted an acknowledgement count for the first port must be determined and stored (in a processor) prior to the decrementing step is carried out.

Claim 6 also inherit same defect as its parent claim 5.

Claim 6 recites limitation "an order count for the first port..exceeds the acknowledgement count for the first port". There is insufficient antecedent basis for this limitation since no step recites determination of an order count for the first port. Claim 1 and 5 only recites the first order and the second order which may be sent through the first port.

Claims 7-9 contain deficiencies similar to claims 4-6. Appropriate corrections are required.

System claims 13-19 corresponds to method claims 3-9 and contain similar deficiencies.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 1, 2, 7, 9, 11, 12, 17, 19, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeJagger (US Pat. 6,667,975) (DeJagger).

As per claim 1, DeJagger teaches a method of balancing data communications loads among data communications ports in systems (see abstract). DeJagger teaches sending data from a computer system (clients C₁, C₂ etc. in Figure 1) to a sever (sever S₁ in Figure 1) via a first port wherein there is at least first port and a second port connected between the computer system and the server (ports 1, 2, 3 etc. Figure 1), receiving through said first port from the server to which the first port is coupled an acknowledgment of data packet, and sending the acknowledgement from the first port to the server (these step is inherent because as disclosed at col. 2 L 49-55 which states that the "load balancing ..is ..dynamic, that is, packets from a given stream may be forwarded on different ports depending each port's current utilization), determining that the first port is not overloaded, the determination being dependent upon at least the data (see col. 2 L 66- col. 3 L 5, "determining whether a prior packet having that stream ID has been distributed to a queue on a port in the group during a predetermined time interval."), and sending a second data packet through the first port to the server, the sending of the order being dependent upon the determination that the first port is not over loaded (see col. 2 L 66- col. 3 L 5 distribution of traffic over ports where multiple packets are data are being transmitted. As discussed herein the data packets are allocated to the first port and the second port depending upon the load condition and thus the determination of overload of data traffic and subsequent sending a second data packet through the first node based upon the determination that the first port is not overloaded is inherently indicated. col. 6 L 24-28, "packets being received ..downstream device.." which

inherently teaches presence of a data packet and acknowledgment of the receipt of the data packet by a down stream device).

It is asserted that the DeJagger is in the applicant's field of endeavor because it attempts to solve the problem of balancing data communication loads among data communication ports. In this regard the instant claim recites application of DeJagger system for management of load balancing which is applied in the environment of trading of securities and attempts to solve the problem of balancing loads among a plurality of communication ports. First order and second order corresponds to data packets and broker-dealer and market are communication devices for the data packets of the security orders. It has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the process and apparatus disclosed in DeJagger are applied in the field of automatic trading of securities as analyzed above.

It would have been obvious to one of ordinary skill in the art at the time of invention to apply and utilize the method as disclose in DeJagger in the field of security trading as per the forgoing analysis in order that the benefits expressly disclosed in DeJagger are realized (see col. 2 L 40-44).

Claim 2: determination of overload comprises determining that a latency for a port is less than a maximum latency for the port (refer to col. 3 L 9-15, the method may also involve, where a prior packet having that stream ID has been distributed to a queue on a port of the group during the predetermined time interval, allocating the packet to that queue. In addition, the method may involve monitoring the port group queues to maintain proper identification of the least utilized queue, col. 3 L 39+ dynamic load balancing based upon load balance time interval)

Claims 7 and 9: determining that the first port is least loaded..sending order through the first port to the market is dependent upon that the first port is least loaded (refer to col. 3 L 5-9, port having a lesser load..).

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Claim 21: said determination being made upon at least the presence of the first order and the presence of the acknowledgement (see at least col. 6 L 24-28, "packets being received ..downstream device.." which inherently teaches presence of a data packet (i.e. a first order) and acknowledgment, please also refer to claim 1 analysis).

Claims 11-12, 17, 19 and 22 have been analyzed as per respective method claims 1-2, 7, 9 and 21.

Allowable Subject Matter

12. Claims 10 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and subject to resolution of 112 (second) rejections of the intervening claims.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

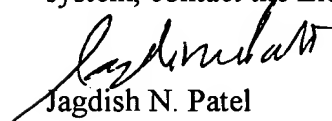
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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAGDISH PATEL whose telephone number is (571) 272-6748. The examiner can normally be reached on 800AM-600PM M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent Millin can be reached on (571)272-6747. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jagdish N. Patel

(Primary Examiner, AU 3624)

6/8/05